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## RAW SEQUENCE LISTING

DATE: 04/03/2002

PATENT APPLICATION: US/09/694,777A

TIME: 11:00:21

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3 <110> APPLICANT: PARDO-FERNANDEZ, LUIS ANGEL  
4 STUHMER, WALTER  
5 BECKH, SYNNOVE  
6 BRUGGEMANN, ANDREA  
7 FERNANDEZ-MIRANDA, DONATO DEL CAMINO  
8 PEREZ, ARACELI SANCHEZ  
9 WESELOH, RUDIGER  
11 <120> TITLE OF INVENTION: NOVEL HUMAN K<sup>+</sup> ION CHANNEL AND THERAPEUTIC APPLICATIONS  
12 THEREOF  
14 <130> FILE REFERENCE: MPG-8  
16 <140> CURRENT APPLICATION NUMBER: 09/694,777A  
17 <141> CURRENT FILING DATE: 2000-10-23  
19 <150> PRIOR APPLICATION NUMBER: PCT/EP99/02695  
20 <151> PRIOR FILING DATE: 1999-04-21  
22 <150> PRIOR APPLICATION NUMBER: EP 98 10 7268.9  
23 <151> PRIOR FILING DATE: 1998-04-21  
25 <160> NUMBER OF SEQ ID NOS: 24  
27 <170> SOFTWARE: PatentIn Ver. 2.1  
29 <210> SEQ ID NO: 1  
30 <211> LENGTH: 3002  
31 <212> TYPE: DNA  
32 <213> ORGANISM: Homo sapiens  
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63 ttcaaggagc acccggcctt ccggctggcc agtgatggct gcctccgggc actggccatg 1740
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88 &lt;210&gt; SEQ ID NO: 2

89 &lt;211&gt; LENGTH: 3083

90 &lt;212&gt; TYPE: DNA

91 &lt;213&gt; ORGANISM: Homo sapiens

93 &lt;400&gt; SEQUENCE: 2

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96 aattttgtgt tggggaatgc tcagatagt gactggccta ttgtgtacag caatgatgga 180
97 ttttgcaagc tgtctggcta tcacagggca gaagtgatgc aaaaaagcag cacctgcagt 240
98 tttatgtatg gggagctgac tgataaagac acgattgaaa aagtgcggca aacatttgag 300
99 aactatgaga tgaattcctt tgaaattctg atgtacaaga agaacaggac acctgtgtgg 360
100 ttctttgtga aaattgctcc aattcgaaac gaacaggata aagtggtttt atttctttgc 420
101 acttttcagt acataacagc tttcaaagc ccaattgagg atgattcatg taaaggctgg 480
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103 gctccaagcg tgcaaaaagg cgagaatgtc cacaagcact ccgcctggc agaggctcta 600
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105 atcatcttac attattgtgt ttttaagacc acgtgggatt ggatcatctt gatcttgacc 720
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138 tcaggcgagg ccacactgaa gaagacagac tcgtgtgaca gtggcatcac caagagcgac 2700
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143 gagttgtttg aaatatcgag gccacagtcc ccagaatcag agagagacat ttttggagcc 3000
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148 &lt;210&gt; SEQ ID NO: 3

149 &lt;211&gt; LENGTH: 962

150 &lt;212&gt; TYPE: PRT

151 &lt;213&gt; ORGANISM: Homo sapiens

153 &lt;400&gt; SEQUENCE: 3

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155 1 5 10 15

157 Phe Leu Glu Asn Ile Val Arg Arg Ser Asn Asp Thr Asn Phe Val Leu

158 20 25 30

160 Gly Asn Ala Gln Ile Val Asp Trp Pro Ile Val Tyr Ser Asn Asp Gly

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164          50          55          60
166 Ser Thr Cys Ser Phe Met Tyr Gly Glu Leu Thr Asp Lys Asp Thr Ile
167 65          70          75          80
169 Glu Lys Val Arg Gln Thr Phe Glu Asn Tyr Glu Met Asn Ser Phe Glu
170          85          90          95
172 Ile Leu Met Tyr Lys Lys Asn Arg Thr Pro Val Trp Phe Phe Val Lys
173          100          105          110
175 Ile Ala Pro Ile Arg Asn Glu Gln Asp Lys Val Val Leu Phe Leu Cys
176          115          120          125
178 Thr Phe Ser Asp Ile Thr Ala Phe Lys Gln Pro Ile Glu Asp Asp Ser
179          130          135          140
181 Cys Lys Gly Trp Gly Lys Phe Ala Arg Leu Thr Arg Ala Leu Thr Ser
182 145          150          155          160
184 Ser Arg Gly Val Leu Gln Gln Leu Ala Pro Ser Val Gln Lys Gly Glu
185          165          170          175
187 Asn Val His Lys His Ser Arg Leu Ala Glu Val Leu Gln Leu Gly Ser
188          180          185          190
190 Asp Ile Leu Pro Gln Tyr Lys Gln Glu Ala Pro Lys Thr Pro Pro His
191          195          200          205
193 Ile Ile Leu His Tyr Cys Val Phe Lys Thr Thr Trp Asp Trp Ile Ile
194          210          215          220
196 Leu Ile Leu Thr Phe Tyr Thr Ala Ile Leu Val Pro Tyr Asn Val Ser
197 225          230          235          240
199 Phe Lys Thr Arg Gln Asn Asn Val Ala Trp Leu Val Val Asp Ser Ile
200          245          250          255
202 Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His Thr Thr
203          260          265          270
205 Phe Val Gly Pro Ala Gly Glu Val Ile Ser Asp Pro Lys Leu Ile Arg
206          275          280          285
208 Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys Leu
209          290          295          300
211 Pro Tyr Asp Val Ile Asn Ala Phe Glu Asn Val Asp Glu Gly Ile Ser
212 305          310          315          320
214 Ser Leu Phe Ser Ser Leu Lys Val Val Arg Leu Leu Arg Leu Gly Arg
215          325          330          335
217 Val Ala Arg Lys Leu Asp His Tyr Ile Glu Tyr Gly Ala Ala Val Leu
218          340          345          350
220 Val Leu Leu Val Cys Val Phe Gly Leu Ala Ala His Trp Met Ala Cys
221          355          360          365
223 Ile Trp Tyr Ser Ile Gly Asp Tyr Glu Ile Phe Asp Glu Asp Thr Lys
224          370          375          380
226 Thr Ile Arg Asn Asn Ser Trp Leu Tyr Gln Leu Ala Met Asp Ile Gly
227 385          390          395          400
229 Thr Pro Tyr Gln Phe Asn Gly Ser Gly Ser Gly Lys Trp Glu Gly Gly
230          405          410          415
232 Pro Ser Lys Asn Ser Val Tyr Ile Ser Ser Leu Tyr Phe Thr Met Thr
233          420          425          430

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236          435          440          445
238 Glu Lys Ile Phe Ala Val Ala Ile Met Met Ile Gly Ser Leu Leu Tyr
239          450          455          460
241 Ala Thr Ile Phe Gly Asn Val Thr Thr Ile Phe Gln Gln Met Tyr Ala
242 465          470          475          480
244 Asn Thr Asn Arg Tyr His Glu Met Leu Asn Ser Val Arg Asp Phe Leu
245          485          490          495
247 Lys Leu Tyr Gln Val Pro Lys Gly Leu Ser Glu Arg Val Met Asp Tyr
248          500          505          510
250 Ile Val Ser Thr Trp Ser Met Ser Arg Gly Ile Asp Thr Glu Lys Val
251          515          520          525
253 Leu Gln Ile Cys Pro Lys Asp Met Arg Ala Asp Ile Cys Val His Leu
254          530          535          540
256 Asn Arg Lys Val Phe Lys Glu His Pro Ala Phe Arg Leu Ala Ser Asp
257 545          550          555          560
259 Gly Cys Leu Arg Ala Leu Ala Met Glu Phe Gln Thr Val His Cys Ala
260          565          570          575
262 Pro Gly Asp Leu Ile Tyr His Ala Gly Glu Ser Val Asp Ser Leu Cys
263          580          585          590
265 Phe Val Val Ser Gly Ser Leu Glu Val Ile Gln Asp Asp Glu Val Val
266          595          600          605
268 Ala Ile Leu Gly Lys Gly Asp Val Phe Gly Asp Val Phe Trp Lys Glu
269          610          615          620
271 Ala Thr Leu Ala Gln Ser Cys Ala Asn Val Arg Ala Leu Thr Tyr Cys
272 625          630          635          640
274 Asp Leu His Val Ile Lys Arg Asp Ala Leu Gln Lys Val Leu Glu Phe
275          645          650          655
277 Tyr Thr Ala Phe Ser His Ser Phe Ser Arg Asn Leu Ile Leu Thr Tyr
278          660          665          670
280 Asn Leu Arg Lys Arg Ile Val Phe Arg Lys Ile Ser Asp Val Lys Arg
281          675          680          685
283 Glu Glu Glu Glu Arg Met Lys Arg Lys Asn Glu Ala Pro Leu Ile Leu
284          690          695          700
286 Pro Pro Asp His Pro Val Arg Arg Leu Phe Gln Arg Phe Arg Gln Gln
287 705          710          715          720
289 Lys Glu Ala Arg Leu Ala Ala Glu Arg Gly Gly Arg Asp Leu Asp Asp
290          725          730          735
292 Leu Asp Val Glu Lys Gly Asn Val Leu Thr Glu His Ala Ser Ala Asn
293          740          745          750
295 His Ser Leu Val Lys Ala Ser Val Val Thr Val Arg Glu Ser Pro Ala
296          755          760          765
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299          770          775          780
301 Ala Lys Leu Gln Ala Pro Gly Ser Glu Cys Leu Gly Pro Lys Gly Gly
302 785          790          795          800
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305          805          810          815
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